

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1, 13 and 25 have been amended. No new matter has been added.

The Office objected to the title as not being descriptive, and to Figure 1 of the drawings for lack of the label "Prior Art".

Claims 1 and 13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-44 stand rejected under 35 U.S.C. § 103(a) based on U.S. Patent no. 6,199,082 of Ferrel et al. ("Ferrel") in view of U.S. Patent no. 6,408,294 of Getchius et al. ("Getchius").

Applicants respectfully traverse the rejections, as explained below. Note that the amendment to claim 25 is made only to correct a minor informality, not in response to the rejections or to comply with any statutory requirement of patentability.

Specification Objection

Regarding the objection to the specification, the amended title is believed to be more descriptive of the invention.

Drawing Objection

Figure 1 has been amended as suggested by the Office.

Section 112 Rejection

The amendments to claims 1 and 13 are believed to overcome the rejection under 35 U.S.C. § 112, second paragraph.

Prior Art Rejections

The present invention generally relates to a technique for improving the streaming of software applications, by using one or more intermediate servers to perform certain caching and predictive streaming operations, such as: to predict blocks of a software application which will be required by a downstream device; to transmit predicted blocks to designated downstream devices; to service requests for blocks issued from downstream devices; to cache blocks received from connected upstream devices; and to issue requests for a particular block to an upstream device when the particular block is needed for transmission to a downstream device and is not present in the cache. Each of the independent claims includes limitations substantially similar to these (regarding claim 13, note that while the term “intermediate server” is not explicitly recited, the “intermediate” limitation is inherently established by the various instances of the terms “upstream” and “downstream” devices in that claim).

To establish a *prima facie* case of obviousness, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. Finally, the prior art reference or references must teach or suggest all of the claim limitations. In re Vaeck, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991); MPEP § 706.02(j) (emphasis added). Furthermore, not only

must the cited combination show all of the claim limitations, but the claimed subject matter as a whole must be obvious in view of the cited art. 35 U.S.C. § 103(a).

The cited combination of Ferrel and Getchius fails to satisfy any of the criteria set forth above. Although Applicants' arguments shall be directed to the cited combination of references, it is useful to first consider their individual disclosures, in order to ascertain what combination, if any, could be made from them.

The Office admits that "Ferrel does not teach application to predict user queries." Office Action, p. 7. Applicants agree with that admission (although none of Applicants' claims recite an application "to predict user queries"). However, the Office cites Getchius as disclosing a principal predictive streaming application and contends it would be obvious to combine Getchius with Ferrel. Applicants disagree.

First, it must be recognized that in contrast with the present invention, neither Ferrel nor Getchius relates to application streaming, i.e., the streaming of software applications. Application streaming is a technique of downloading a software application from one machine to another so that the software application can begin executing on the second machine even before the application has been completely downloaded.

Ferrel discloses a multimedia publishing system that is intended to enable more efficient distribution of multimedia, by separating the content from the format of the content. Col. 5, lines 7-28. Ferrel does not relate to application streaming. In fact,

despite Ferrel's frequent use of the word "stream", Ferrel does not actually relate to any form of "streaming", as the term is used in the present application (not even simple data streaming, i.e., audio or video streaming). The term "stream" as used in Ferrel means nothing more than "the conceptual equivalent of a single disk file. Streams are the basic file system component in which data lives." Col. 12, lines 38-39, 45-47. A "stream", as the term is used in Ferrel, does not refer to the manner of delivery of the information.

Contrary to the Office's contention, therefore (and in contrast with claim 1), Ferrel does not disclose or suggest any predictive streaming application, and certainly not one that resides in an intermediate server. The Office cites Ferrel's use of an Object Broker in this regard (Office Action, p. 5, citing Ferrel at col. 43, lines 36-48). However, while the Object Broker does service requests from downstream devices and might be considered to reside on an intermediate server, it has nothing to do with streaming, and especially not application streaming.

Likewise, Ferrel does not disclose or suggest a principal server that includes a principal predictive streaming application and a principal streaming communication manager.

Getchius is equally irrelevant to the present invention. Getchius relates to information search and retrieval; it has nothing to do with application streaming. The Office incorrectly cites Getchius at col. 32, lines 44-58 as disclosing a principal predictive streaming application figures to predict blocks which will be required by device connected to the principal server. The cited disclosure in Getchius has

absolutely nothing to do with prediction. Even where Getchius does discuss prediction (e.g., col. 36, lines 9-15), it has nothing to do with streaming.

In view of the foregoing, it should be apparent that the cited combination of references fails to disclose all of the limitations of the present invention, as claimed, including an intermediate server that includes a predictive streaming application to perform the operations mentioned above (first paragraph under this subheading). Furthermore, one of ordinary skill in the art would have no motivation to combine the teachings of Ferrel and Getchius, since they relate to completely different problems (Ferrel is directed to more efficient multimedia content distribution; Getchius is directed to term optimization for purposes of information searching). Likewise, one of ordinary skill in the art would have no reasonable expectation of success at making the present invention by relying on the disclosures of Ferrel and Getchius.

Furthermore, even if the Examiner were able to find prior art that shows a predictive streaming application for use in application streaming, that still would not make the present invention obvious. In particular, it still would not be obvious to use one or more intermediate servers for application streaming, each with its own predictive streaming application and cache and which performs the operations mentioned above.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent

claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

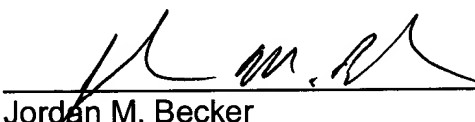
Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,
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